

ABSTRACT OF THE DISCLOSURE

A system to generate an enhanced acoustic transmission signal includes a carrier signal generator to generate a carrier signal. A data signal generator is provided to receive data and to generate a data signal representing the data. A signal modulator is also provided to modulate the carrier signal with the data signal to form a modulated carrier signal at a carrier frequency. The system includes a masking signal generator to generate a masking signal to mask the modulated carrier signal from being audible by a human ear. An audio input device is provided to receive audio and to generate an audio signal based on the audio, wherein a frequency band surrounding the carrier frequency is removed from the audio signal. A signal adder is also provided to combine the modulated carrier signal, the masking signal, and the audio signal to form the enhanced acoustic transmission signal.